

WHAT IS CLAIMED IS

1. A copper foil for fine pattern printed circuits comprising untreated copper foil roughening treated on its surface, wherein said untreated copper foil before roughening treatment is an electrodeposited copper foil having a surface roughness in terms of 10-point average roughness R_z of not more than $2.5 \mu\text{m}$ and a minimum distance between peaks of rough pyramid of at least $5 \mu\text{m}$.
2. A copper foil for fine pattern printed circuits comprising untreated copper foil roughening treated on its surface, wherein said untreated copper foil before roughening treatment is an electrodeposited copper foil having a surface roughness in terms of 10-point average roughness R_z of not more than $2.5 \mu\text{m}$, a minimum distance between peaks of rough pyramid of at least $5 \mu\text{m}$, and crystal grains of an average particle size of not more than $2 \mu\text{m}$ exposed at the surface.
3. A copper foil for fine pattern printed circuits as set forth in claim 1 or 2, wherein at least one surface of said untreated copper foil is roughening treated by being formed with a burnt plating layer by burnt plating of copper containing at least one of molybdenum, iron, cobalt, nickel and tungsten.
4. A copper foil for fine pattern printed circuits as set forth in claim 3, wherein said burnt plating layer

is formed over it with a copper plating layer.

5. A copper foil for fine pattern printed circuits as set forth in claim 3, wherein said burnt plating layer is provided over it with at least one layer of a nickel 5 plating layer, nickel alloy plating layer, zinc plating layer, zinc alloy plating layer, cobalt plating layer, cobalt alloy plating layer, chrome plating layer, and chrome alloy plating layer and is further provided over that with a layer formed by treatment by chromate or a 10 silane coupling agent according to necessity.

6. A copper foil for fine pattern printed circuits as set forth in claim 4, wherein said burnt plating layer or said copper plating layer is provided over it with at least one layer of a nickel plating layer, nickel alloy 15 plating layer, zinc plating layer, zinc alloy plating layer, cobalt plating layer, cobalt alloy plating layer, chrome plating layer, and chrome alloy plating layer and is further provided over that with a layer formed by treatment by chromate or a silane coupling agent 20 according to necessity.

7. A method of production of a copper foil for fine pattern printed circuits comprising roughening treating on the surface of untreated electrodeposited copper foil formed in a copper plating bath into which a 25 compound having mercapto groups, chloride ions, and a low

molecular weight glue having a molecular weight of not more than 10,000 and/or a high molecular weight polysaccharide are added at a range of current density of 50 A/dm² to 100 A/dm².

5 8. A method of production of a copper foil for fine pattern printed circuits comprising forming a burnt plating layer of copper on at least one surface of an untreated electrodeposited copper foil having a surface roughness in terms of 10-point average roughness Rz of
10 not more than 2.5 µm and a minimum distance between peaks of rough pyramid of at least 5 µm by electroplating in a plating bath containing at least one of 0.001 to 5 g-Mo/l, 0.01 to 10 g-M/l (M=Fe and/or Co and/or Ni) and 0.1 to 1 ppm W while holding a plating solution temperature of 10
15 to 30°C, using the untreated electrodeposited copper foil as the cathode, and at a current density near the limit current density of the bath.

9. A method of production of a copper foil for fine pattern printed circuits comprising forming a burnt plating layer of copper on at least one surface of an untreated electrodeposited copper foil having a surface roughness in terms of 10-point average roughness Rz of not more than 2.5 µm, a minimum distance between peaks of rough pyramid of at least 5 µm, and crystal grains of an
25 average particle size of not more than 2 µm exposed at

the surface, by electroplating in a plating bath containing at least one of 0.001 to 5 g-Mo/l, 0.01 to 10 g-M/l (M=Fe and/or Co and/or Ni) and 0.1 to 1 ppm W while holding a plating solution temperature of 10 to 30°C,
5 using the untreated electrodeposited copper foil as the cathode, and at a current density near the limit current density of the bath.